Product Information Sheet for HM-868

Bifidobacterium sp., Strain MSTE12

Catalog No. HM-868

For research use only. Not for human use.

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Manufacturer:
BEI Resources

Product Description:
Bacteria Classification: *Bifidobacteriaceae*, *Bifidobacterium*
Species: *Bifidobacterium* sp.
Strain: MSTE12
Original Source: *Bifidobacterium* sp., strain MSTE12 was isolated from human dental plaque.[1]
Comments: *Bifidobacterium* sp., strain MSTE12 (HMP ID 1494) is a reference genome for The Human Microbiome Project (HMP). HMP is an initiative to identify and characterize human microbial flora. The complete genome of *Bifidobacterium* sp., strain MSTE12 was sequenced at the J. Craig Venter Institute (GenBank: AZYA00000000).
Note: HMP material is taxonomically classified by the depositor. Quality control of these materials is only performed to demonstrate that the material distributed by BEI Resources is identical to the deposited material.

Bifidobacterium species are anaerobic, non-motile, Gram-positive bacteria commonly found in the normal human gut.[2] They are among the first colonizers of the essentially sterile gastrointestinal tract of newborns and one of the dominant genera of the microbiota of healthy breastfed infants. Not all bifidobacteria are beneficial to their host. However, in general, *Bifidobacterium* species are considered to be beneficial organisms for human health and for this reason are widely used as probiotics.[2-5]

Material Provided:
Each vial contains approximately 0.5 mL of bacterial culture in Modified Reinforced Clostridial broth supplemented with 10% glycerol.

Note: If homogeneity is required for your intended use, please purify prior to initiating work.

Packaging/Storage:
HM-868 was packaged aseptically in cryovials. The product is provided frozen and should be stored at -60°C or colder immediately upon arrival. For long-term storage, the vapor phase of a liquid nitrogen freezer is recommended. Freeze-thaw cycles should be avoided.

Growth Conditions:
Media:
Modified Reinforced Clostridial broth or equivalent
Tryptic Soy agar with 5% defibrinated sheep blood or equivalent
Incubation:
Temperature: 37°C
Atmosphere: Anaerobic
Propagation:
1. Keep vial frozen until ready for use, then thaw.
2. Transfer the entire thawed aliquot into a single tube of broth.
3. Use several drops of the suspension to inoculate an agar slant and/or plate.
4. Incubate the tube, slant and/or plate at 37°C for 48 to 72 hours.

Citation:
Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH as part of the Human Microbiome Project: *Bifidobacterium* sp., Strain MSTE12, HM-868."

Biosafety Level: 2
Appropriate safety procedures should always be used with this material. Laboratory safety is discussed in the following publication: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, and National Institutes of Health. Biosafety in Microbiological and Biomedical Laboratories. 5th ed. Washington, DC: U.S. Government Printing Office, 2009; see www.cdc.gov/biosafety/publications/bmbl5/index.htm.

Disclaimers:
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References:

1. Sizova, M. V., et al. "New Approaches for Isolation of Previously Uncultivated Oral Bacteria." Appl. Environ. Microbiol. 78 (2012): 194-203. PubMed: 22057871.
2. Cronin, M., et al. "Progress in Genomics, Metabolism and Biotechnology of Bifidobacteria." Int. J. Food Microbiol. 149 (2011): 4-18. PubMed: 21320731.
3. Kleerebezem, M. and E. E. Vaughan. "Probiotic and Gut Lactobacilli and Bifidobacteria: Molecular Approaches to Study Diversity and Activity." Annu. Rev. Microbiol. 63 (2009): 269-290. PubMed: 19575569.
4. Lee, J. H. and D. J. O'Sullivan. "Genomic Insights into Bifidobacteria." Microbiol. Mol. Biol. Rev. 74 (2010): 378-416. PubMed: 20805404.
5. Leahy, S. C., et al. "Getting Better with Bifidobacteria." J. Appl. Microbiol. 98 (2005): 1303-1315. PubMed: 15916644.

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